

Primary and Secondary Prevention Public Health Perspective and Teen Health-Risk Behaviors In Abstinence-Based Education

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BACKGROUND

The national Youth Risk Behavior Survey for 2007 indicates that 52.2% of high school students stated they did not ever have sexual intercourse. The percents who have not had sexual intercourse decrease with grade level (See Results in Blue), and vary by gender (45.9 F, 49.8 M) and race/ethnicity (56.3 W, 37.0 B, 48.0 H)

When applied to adolescents, according to the US Preventive Services Task Force 1989, primary prevention public health measures involve entirely asymptomatic adolescents and identify secondary prevention and treat asymptomatic adolescents who have developed risk factors. In the Society for Public Health Education resource text (2010), primary prevention programs take action prior to the onset of a health problem to intercept its causation or modify its course before adolescents are involved. Secondary prevention interrupts problematic behaviors among adolescents engaged in unhealthy decision making.

Per CDC HP2010, sexual activity is a priority teen risk behavior and alcohol and drugs increase the risk. Abstinence-based school and after school education programs are public health primary and secondary prevention programs addressing the adolescent risk behavior of sexual activity and the epidemics of STDs and unwanted pregnancy. Such programs can be viewed more broadly as a public health teen risk-behavior prevention education paradigm.

The purpose is to demonstrate that abstinence education can improve the overall health of adolescents who are sexually active and who are not sexually active in high school.

STUDY METHODS & DESIGN

Reported are pre-post questionnaire from 9 different programs offering 4-6 hours of classroom instruction in the 2008-09 school year.

Demographic information along with 33 5-category Likert-type questions adapted from other surveys. The items examined psychosocial indicators: knowledge, attitudes, skills about sexual abstinence, attitudes towards alcohol and drugs and condoms, and behavioral intentions with respect to sexual activity. Additional questions were asked about recent abstinence or sex education based instruction, past sexual activity, parent belief about sex before marriage. Cronbach alphas range from .52 to .92 by program.

HYPOTHESES

Three hypotheses guided analysis with high school students in diverse urban and suburban communities, more often impoverished, African American & Hispanic:

1. Health Promotion Intervention Hypothesis: demonstrate gains in knowledge, attitudes skills?
2. Primary Prevention Population Hypothesis: adolescents who have never had sexual intercourse, report behavioral intentions to remain abstinent;
3. Secondary Prevention Population Hypothesis: adolescents who are sexually active, report behavioral intentions to discontinue sexual activity and to be abstinent with respect to sexual activity (secondary abstinence).

ANALYSES
Univariate independent pre-post comparisons (t-tests, chi-square) were performed on individual items, and scales and for subgroups with p < .01 level. Smaller samples with paired responses yielded similar results. Multivariate analyses using the mediation model and with follow-up questionnaires will be reported.

Adolescent Sample N=8851		Ever Sexually Active		Ever Sexual Intercourse		U.S. National YRBBS 2007 Sample Ever Had Sexual Intercourse	
Age	N	Yes	Yes	Grade	Yes	No	
14	1,428	26%	18%				
15	3,541	27%	23%	Freshman	33%	67%	
16	2,721	43%	35%	Sophomore	44%	56%	
17	854	57%	50%	Junior	56%	44%	
18	407	64%	61%	Senior	65%	35%	

Adolescent Responses Pre and Post Abstinence education Based on Whether or Not Adolescents Were Sexually Active "In the FUTURE, HOW FAR WILL YOU GO with your boyfriend or girlfriend before marriage?"									
ACTIVITY	Prior Sexual Activity (%)		Pre		Post		Conclusion		
	YES	NO	Pre	Post	Pre	Post	INCREASE in Non Sexual Behavioral Intentions (Q1-Q3) In Each Group (p < .0001)		
1. No activity	2.2	3.5	7.6	6.9	INCREASE in Non Sexual Behavioral Intentions (Q1-Q3) In Each Group (p < .0001)			YES 15.6 to 28.5 NO 51.3 to 59.2	
2. Holding hands	1.2	1.7	2.8	3.4	No Difference in Q4-Q6 Behavioral Intentions About Sexual Activity in each groups.			Pre to Post YES 11.0 to 13.1 NO 25.1 to 24.4	
3. Kissing and hugging	12.2	23.3	40.8	48.9	DECREASE in Each Group (p < .0001)			100% 100% 100%	
4. Touching above the waist, under the clothes	2.4	4.5	9.5	9.9	No Difference in Q4-Q6 Behavioral Intentions About Sexual Activity in each groups.			Pre to Post YES 11.0 to 13.1 NO 25.1 to 24.4	
5. Touching below the waist, under the clothes	4.0	4.8	10.0	9.8	DECREASE in Each Group (p < .0001)			100% 100% 100%	
6. Oral sex	4.6	3.8	5.6	4.7	DECREASE in Each Group (p < .0001)			100% 100% 100%	
7. Sexual Intercourse	73.5	58.3	23.6	4.7	DECREASE in Each Group (p < .0001)			100% 100% 100%	
Total									

Category & Total Scores	Pre and Post Mean Percents Ever (Yes or No) Sexually Active Before Abstinence Education		Pst - Pre Difference
	Pre	Post	
Knowledge	Yes 66.7 No 72.7	Yes 76.4 No 81.7	9.7 9.0
Attitude	Yes 59.7 No 70.1	Yes 68.5 No 77.6	8.8 7.6
Skills	Yes 58.5 No 73.6	Yes 65.5 No 77.6	7.0 4.0
Drugs	Yes 53.1 No 64.3	Yes 60.0 No 70.4	6.9 6.1
Alcohol	Yes 56.8 No 63.0	Yes 67.7 No 72.9	10.9 9.9
Condoms	Yes 38.5 No 62.4	Yes 49.8 No 69.5	11.3 7.1
Behavioral Intentions	Yes 56.0 No 67.8	Yes 65.0 No 75.2	9.0 7.4
Total Score			

CONCLUSION

The primary-secondary prevention paradigm is a useful framework to guide curriculum development, fidelity assessment and outcome evaluation.

Abstinence curriculum changed minds of adolescents who were sexually active before instruction and reinforced minds of adolescents who are not sexually active.

Evidence suggests that a larger impact (larger pre-post differences) were observed with adolescents who were sexually active at the start of the program.